

Claims:

1. An apparatus for use with a milking machine comprising one or more teat cups and a vacuum source providing a pulsed vacuum in the teat cups, for
5 collecting a small volume of liquid for cold storage, the apparatus comprising:
a flexible bag comprising a collar defining an opening;
a housing for the flexible bag comprising an inlet conduit extending into
the housing for receiving the liquid from the one or more teat cups and
comprising an opening within the housing for delivering the liquid; a port for
10 providing a vacuum within the housing from said vacuum source; and
means for retaining the collar of the flexible bag about the inlet conduit so
that the bag receives liquid from the inlet opening; and
means for transfer of the vacuum from the port for providing a vacuum
with the housing to the inlet conduit when the collar of the flexible bag is
15 retainable about the inlet conduit by the means for retaining.
2. An apparatus according to claim 1 wherein the means for transfer of the
vacuum to the inlet conduit is selected from (a) providing space between the
collar and inlet conduit when the collar is retained about the inlet conduit by the
20 means for retaining and (b) providing a pressure equalising port in the inlet
conduit.
3. An apparatus according to claim 2 wherein the means for transfer of the
vacuum comprises a space between the collar and inlet conduit when the collar
25 is retained about the inlet conduit by said means for retaining.
4. An apparatus according to claim 1 wherein the collar is relatively rigid
when compared with the flexible bag.
- 30 5. An apparatus according to claim 1 wherein the dimensions of the collar
are greater than the adjacent portion of the inlet conduit to provide a space
there between to allow the vacuum applied to the housing to be transferred from
the vacuum port to said inlet conduit.

6. An apparatus according to claim 2 wherein the collar of flexible bag is retained with the inlet conduit extending into the flexible bag through the opening.
- 5 7. An apparatus according to claim 6 wherein the collar is sufficiently rigid to maintain its shape when retained about the inlet conduit by the retaining means.
- 10 8. An apparatus according to claim 7 wherein the flexible bag is a lay flat bag comprising two sides joined by a heat seal.
9. An apparatus according to claim 1 wherein the housing is sufficiently rigid to retain its shape under the vacuum from said milking machine.
- 15 10. An apparatus according to claim 1 wherein the receptacle has a volume in the range of from 500 ml to 50 litres.
11. An apparatus according to claim 1 wherein the receptacle has a volume in the range of from 5 litres to 40 litres.
- 20 12. An apparatus according to claim 1 wherein the receptacle has a volume in the range of from 10 to 25 litres.
13. An apparatus according to claim 1 wherein the housing comprises a lid comprising the top wall and a body comprising side and bottom walls.
- 25 14. An apparatus according to claim 12 wherein the lid comprises said fluid inlet comprising a conduit for receiving liquid extending down from said wall to provide an inlet port within the housing and wherein said lid further comprises the port for providing a vacuum.
- 30 15. An apparatus according to claim 1 wherein the inlet conduit is provided with retaining means for cooperating with the collar of the flexible bag.

16. An apparatus according to claim 15 wherein the flexible bag has a relatively rigid collar defining the bag opening and the collar comprises a flange adapted to cooperate with the retaining means to retain the collar for receiving liquid from the inlet.

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17. An apparatus according to claim 1 wherein the bag comprises an internal pocket to allow sampling of the bag contents.

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18. An apparatus according to claim 17 wherein the internal pocket is formed by a heat seal extending from an edge of the bag.

19. An apparatus according to claim 17 wherein the pocket has a volume of no more than 5% of the total volume of the flexible bag.

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20. An apparatus according to claim 1 for collecting a small volume of liquid said apparatus further comprising:

a plurality of teat cups;

a vacuum source for applying a vacuum to the teat cups for collecting liquid;

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a reservoir for collecting relatively large volumes of milk; and

a vacuum line for providing a vacuum to the vacuum part of the housing.

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21. An apparatus according to claim 20 further comprising a pressure oscillation means for providing pulsating vacuum to the teat cups and a vacuum line downstream of the apparatus for collecting relatively small volumes of liquid.

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22. An apparatus according to claim 20 further comprising a case for receiving liquid filled bags for freezing to provide a thickness of less than 20 cm.

23. An apparatus according to claim 1 when used in collection of liquid selected from the group consisting of ungulate colostrum, hyperimmune colostrum and specialty milks.